# Getting Started with ESX

ESX 4.0
vCenter Server 4.0

This document supports the version of each product listed and supports all subsequent versions until the document is replaced by a new edition. To check for more recent editions of this document, see http://www.vmware.com/support/pubs.

EN-000118-01

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# Updated Information

This *Getting Started with ESX* is updated with each release of the product or when necessary.

This table provides the update history of the *Getting Started with ESX*.

| Revision | Description |
|---|---|
| EN-000118-01 | Minor change in "vCenter Server Prerequisites," on page 18. |
| EN-000118-00 | Initial release. |

# Getting Started with ESX

Get started with ESX quickly with this information about installation and initial setup. Follow the procedures included here to install and set up a basic inventory for a single-host virtualization environment. After your host is set up with a working virtual machine, you can install vCenter Server and explore a multiple-host virtualization environment.

This information is for experienced Windows or Linux system administrators who will be installing VMware ESX to deploy virtualization for the first time. Specifically, it is for users who meet the following requirements:

- Do not yet have the ESX software installed
- Do not yet have the vSphere Client or VMware vCenter Server installed.

## Getting Started Tasks

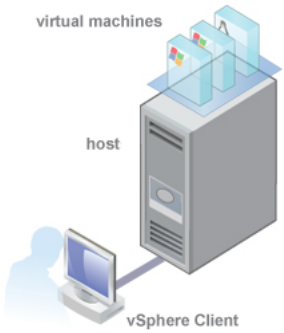
The getting started tasks take you from initial setup of a new virtualization host to a working virtual machine. After you have a host and functional virtual machine, you can set up a managed host environment with vCenter Server.

Getting started with ESX includes the following tasks:

- Installing ESX and adding the host to your network
- Installing the vSphere Client and connecting to the ESX host
- Deploying and running a virtual machine

Completing the getting started tasks sets up the single-host management system for virtualization as shown in Figure 1.

**Figure 1.** Basic Single-Host Management System




After the initial setup of ESX, you can deploy vSphere 4.0 with vCenter Server to manage multiple hosts.

# ESX Installation

Install ESX to get started with running virtual machines. The machine running ESX virtualization software acts as a host in your virtual infrastructure. Hosts provide CPU and memory resources, access to storage, and network connectivity for the virtual machines that reside on them.

## Prerequisites for Installing ESX

Before you begin the installation procedure, ensure that the host meets the prerequisites.

The prerequisites are as follows:

- If ESX will not use an NTP server, make sure that the server hardware clock is set to UTC. This setting is in the system BIOS.
- Make sure the host has a supported network adapter.

## ESX Hardware Requirements

Using ESX requires specific hardware and system resources.

### 64-Bit Processor

- VMware ESX 4.0 will only install and run on servers with 64-bit x86 CPUs.
- Known 64-bit processors:
  - All AMD Opterons support 64 bit.
  - All Intel Xeon 3000/3200, 3100/3300, 5100/5300, 5200/5400, 7100/7300, and 7200/7400 support 64 bit.
  - All Intel Nehalem (no Xeon brand number assigned yet) support 64 bit.

### RAM

2GB RAM minimum

### Network Adapters

One or more network adapters. Supported network adapters include:

- Broadcom NetXtreme 570x gigabit controllers
- Intel PRO 1000 adapters

### SCSI Adapter, Fibre Channel Adapter, or Internal RAID Controller

One or more of the following controllers (any combination can be used):

- Basic SCSI controllers are Adaptec Ultra-160 and Ultra-320, LSI Logic Fusion-MPT, and most NCR/Symbios SCSI controllers.
- Fibre Channel, see the *Hardware Compatibility Guide* at http://www.vmware.com/resources/compatibility.
- RAID adapters supported are HP Smart Array, Dell Perc (Adaptec RAID and LSI MegaRAID), and IBM (Adaptec) ServeRAID controllers.

### Installation and Storage

- SCSI disk, Fibre Channel LUN, or RAID LUN with unpartitioned space. In a minimum configuration, this disk or RAID is shared between the service console and the virtual machines.

- For hardware iSCSI, a disk attached to an iSCSI controller, such as the QLogic qla405x. Software iSCSI is not supported for booting or installing ESX.
- Serial attached SCSI (SAS).
- For Serial ATA (SATA), a disk connected through supported SAS controllers or supported on-board SATA controllers. SATA disk drives connected behind supported SAS controllers or supported on-board SATA controllers.
- Supported SAS controllers include:
  - LSI1068E (LSISAS3442E)
  - LSI1068 (SAS 5)
  - IBM ServeRAID 8K SAS controller
  - Smart Array P400/256 controller
  - Dell PERC 5.0.1 controller
- Supported on-board SATA controllers include:
  - Intel ICH9
  - Nvidia MCP55
  - ServerWorks HT1000

When installing ESX on SATA drives, consider the following:

- Ensure that your SATA drives are connected through supported SAS controllers or supported onboard SATA controllers.
- **NOTE** ESXi does not support using local, internal SATA drives on the host server to create VMFS datastores that are shared across multiple ESXi hosts.

ATA and IDE disk drives – ESX supports installing and booting on either an ATA drive or ATA RAID is supported, but ensure that your specific drive controller is included in the supported hardware. IDE drives are supported for ESX installation and VMFS creation.

## Install ESX Using the Graphical Mode

The graphical mode is the recommended installation method if you are installing ESX for the first time. The graphical mode runs by default if you do not select an alternate installation method.

### Prerequisites

See "Prerequisites for Installing ESX," on page 8.

### Procedure

1 Use the BIOS to set the server to boot from the DVD.

   a Reboot the machine.

   b Press the key required to enter your machine's BIOS setup or boot menu.

   This key is often a function key or Delete.

   c Set the CD-ROM drive as the first boot device.

2 Select **Install ESX in graphical mode**.

   A series of installation messages scroll past until the Welcome page appears.

3 Click **Next** to continue.

4 Select **I accept the terms of the license agreement** and click **Next**.

You cannot install this product unless you accept the license agreement.

**NOTE** If the alignment of the license agreement screen is skewed to the left, you might need to auto-adjust your host monitor.

5 Select your keyboard type from the list and click **Next**.

6 Select whether to install custom drivers with the ESX installation.

You might need custom drivers if your system is not listed in the *Hardware Compatibility Guide* and has a network or storage device that was not originally compatible with ESX 4.0.

- Select **Yes** and click **Add** to install custom drivers. The installer prompts you to insert the media containing the custom drivers. After you add the custom drivers to the list, the installer prompts you to reinsert the ESX installation DVD and continue with the installation. Click **Next** to continue.
- Select **No** if you do not need to install custom drivers. You can install custom drivers after the ESX installation is complete, using other command-line and GUI tools available to you, such as the vSphere CLI and vCenter Update Manager. Click **Next** to continue.

7 Click **Yes** to load the required ESX drivers.

8 Configure ESX licensing.

- Select **Enter a serial number now**, enter the vSphere license key, and click **Next**.
- Select **Enter a license key later** and click **Next**. This choice allows you to evaluate ESX (or enter a vSphere license key later using the vSphere Client).

9 Select the network adapter for the ESX service console.

Virtual machine network traffic shares this network adapter until you configure a virtual switch for another network adapter. You can configure other network adapters at a later time from the vSphere Client.

10 If the adapter is connected to a VLAN, select **This adapter requires a VLAN ID**, enter a VLAN ID number between 0 and 4095, and click **Next**.

11 Configure the network settings.

VMware recommends that you use a static IP address to simplify client access. If you want to use static settings but you do not have the required information, you can use DHCP for the installation and configure static settings after you consult with your network administrator.

For the host name, type the complete host name including the domain. This option is available only if you use a static IP address.

12 (Optional) Click **Test these settings** to test the network interface.

13 Select a setup option.

| Option | Description |
|---|---|
| **Standard Setup** | The installer configures the default partitions on a single hard drive or LUN where you install ESX. The default partitions are sized based on the capacity of the hard drive or LUN. |
| **Advanced Setup** | Allows you to specify `esxconsole.vmdk` partition settings, kernel options, and a bootloader location and password. If you leave the **Configure boot loader automatically** option selected, the installer places the boot loader in the master boot record (MBR). |

14 Select a location to install ESX.

CAUTION The installer erases all content on the selected storage device.

Installing ESX on a USB device is not supported.

Click **Next** and click **OK** to confirm your selection.

15 Configure the time zone.

16 Configure the date and time settings.

- Select **Automatically** and enter the IP address or host name of an NTP server.
- Select **Manually** to use the machine date and time detected by the installer or to set the date and time yourself. If you select **Manually** and you do not have a functioning mouse, you can change the calendar month and year by using Ctrl-left-arrow and Ctrl-right-arrow for the month, and Ctrl-up-arrow and Ctrl-down-arrow for the year.

17 Enter a root password.

It must contain between 6 and 64 characters.

18 Confirm your installation configuration and click **Next**.

19 Click **Next** and then click **Finish** to exit the installer and reboot the host.

20 During reboot, press the key required to enter your machine's BIOS setup or boot menu

This key is often a function key or Delete.

21 Set the first boot device to be the drive on which you installed ESX.

#### What to do next

After you complete the installation, use the vSphere Client to connect to the ESX host.

# Managing Your First ESX Host

You manage hosts using the vSphere Client.

After you finish initial setup of the host, download and install the vSphere Client. Connect to the host and add your first virtual machine by importing a virtual appliance.

## vSphere Client Hardware Requirements

Make sure that the vSphere Client hardware meets the requirements.

- CPU – 1 CPU
- Processor – 266MHz or faster Intel or AMD processor (500MHz recommended).
- Memory – 200MB RAM
- Disk Storage – 1GB free disk space for a complete installation, which includes the following components:
  - Microsoft .NET 2.0
  - Microsoft .NET 3.0 SP1
  - Microsoft Visual J#
  - vSphere Client 4.0
  - vSphere Host Update Utility 4.0

You must also have 400MB free on the drive that has your `%temp%` directory.

If all of the prerequisites are already installed, 300MB of free space is required on the drive that has your `%temp%` directory, and 450MB is required for the vSphere Client 4.0.

- Networking – Gigabit connection recommended.

## vSphere Client Software Requirements

Make sure that your operating system supports the vSphere Client.

The vSphere Client requires the Microsoft .NET 3.0 SP1 Framework. If your system does not have it installed, the vSphere Client installer installs it.

For a list of supported operating systems, see the *vSphere Compatibility Matrixes* at http://www.vmware.com/pdf/vsphere4/r40/vsp_compatibility_matrix.pdf on the VMware vSphere documentation Web site.

## Download the vSphere Client

The vSphere Client is a Windows program that you can use to configure the host and to operate its virtual machines. You can download vSphere Client from any host.

### Prerequisites

You must have the URL of the host. This is the IP address or host name.

### Procedure

1. From a Windows machine, open a Web browser.
2. Enter the URL for the host.

   For example, `http://testserver.vmware.com` or `http://10.20.80.176`.

   The welcome page appears.
3. Click **Download the vSphere Client** under Getting Started.
4. Click **Yes** in the security warning dialog box that appears.

### What to do next

Install the vSphere Client.

## Install the vSphere Client

The vSphere Client enables you to connect to an ESX/ESXi host and to a vCenter Server system.

The vSphere Client must be installed on a Windows machine that has network access to the ESX host and Internet access.

### Procedure

1. Run the vSphere Client installer.
   - In the vCenter Server installer, double-click the `autorun.exe` file at `C:\<vc-installer location>\` and click **VMware vSphere Client**.
   - If you downloaded the vSphere Client, double-click the `VMware-viclient.exe` file.
2. Choose a language for the installer and click **OK**.
3. When the Welcome screen appears, click **Next**.
4. Select **I agree to the terms in the license agreement** and click **Next**.

5 Type your user name and company name and click **Next**.

6 Select **Install VMware vSphere Host Update Utility** to manage host patches, updates, and upgrades from this machine and click **Next**.

7 Accept the default installation location and click **Next**, or click **Change** to select a different location and click **Next**.

8 Click **Install** to begin the installation.

9 Click **Finish** to complete the installation.

### What to do next

Connect to the host with the vSphere Client.

## Start the vSphere Client and Log In to ESX

When you connect to an ESX host with the vSphere Client, you can manage the host as well as all of the virtual machines that the host manages.

### Procedure

1 Start the vSphere Client.

Double-click a shortcut or select **Start > Programs > VMware > VMware vSphere Client**.

2 Log in to the ESX host as the administrator.

a Enter the IP address or host name you noted earlier.

b Enter the username **root**.

c Enter the password you specified using the direct console.

If you did not set the password using the direct console, leave the **Password** field empty.

3 Click **Login**.

A security warning appears.

4 To continue, click **Ignore**.

This security warning message occurs because the vSphere Client detected a certificate that the ESX host signed (default setting). For highly secure environments, VMware recommends certificates that a trusted third party generates. You can set up third-party certificates later.

### What to do next

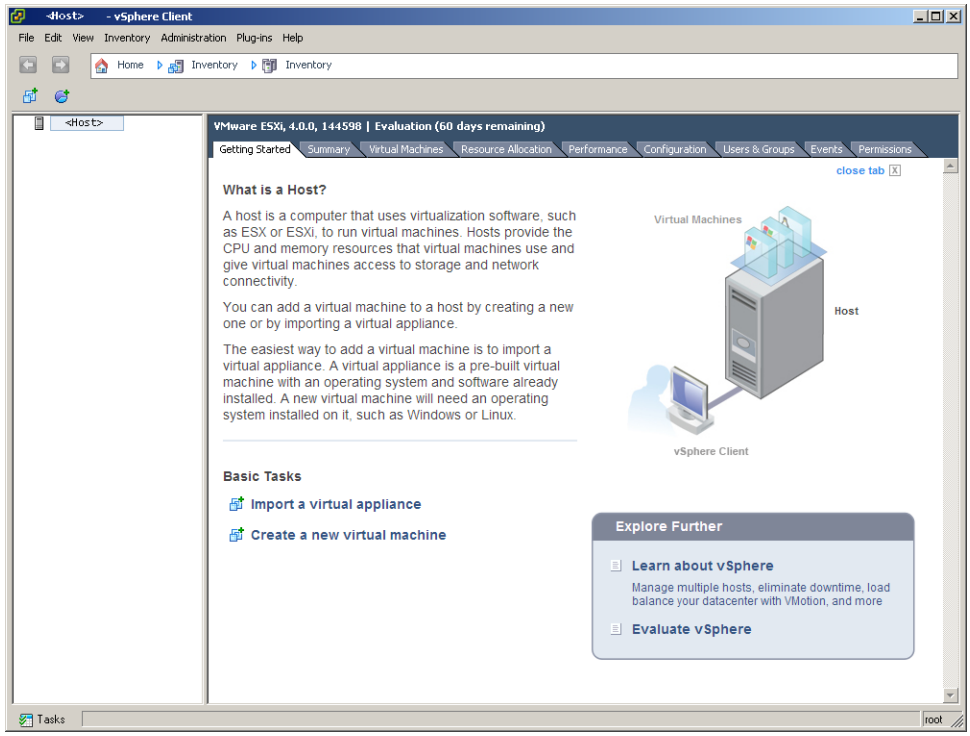
After you connect to the host with the vSphere Client, use the **Getting Started** tabs to import a virtual appliance.

## Add Your First Virtual Machine by Importing a Virtual Appliance

After you connect to the host machine, you can add a virtual machine to the host. You can import or create one or more virtual machines on a single host.

To add virtual machines to hosts, you can build a new virtual machine or import a virtual appliance from the VMware Web site. A virtual appliance is a prebuilt virtual machine with an operating system and applications already installed. The vSphere Client **Getting Started** tab provides steps to guide you through both options. If this is your first virtual machine, VMware recommends that you import a virtual appliance.

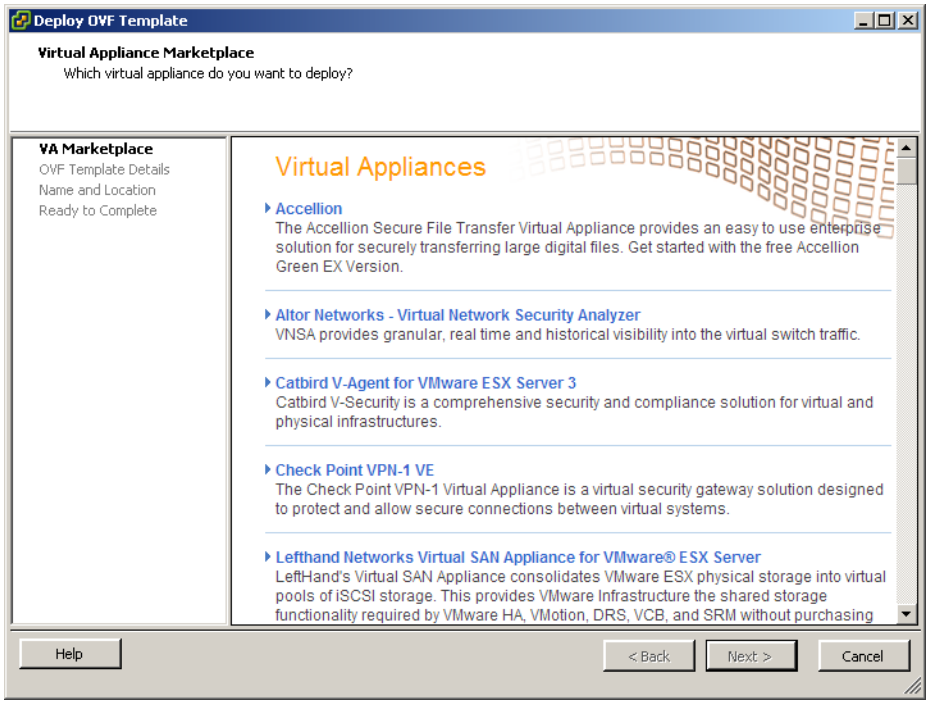
**Figure 2.** Getting Started Tab for a Host


<Host> - vSphere Client
File Edit View Inventory Administration Plug-ins Help
Home Inventory Inventory
<Host>
VMware ESXi, 4.0.0, 144598 | Evaluation (60 days remaining)
Getting Started Summary Virtual Machines Resource Allocation Performance Configuration Users & Groups Events Permissions
close tab
What is a Host?
A host is a computer that uses virtualization software, such as ESX or ESXi, to run virtual machines. Hosts provide the CPU and memory resources that virtual machines use and give virtual machines access to storage and network connectivity.
You can add a virtual machine to a host by creating a new one or by importing a virtual appliance.
The easiest way to add a virtual machine is to import a virtual appliance. A virtual appliance is a pre-built virtual machine with an operating system and software already installed. A new virtual machine will need an operating system installed on it, such as Windows or Linux.
Virtual Machines
Host
vSphere Client
Basic Tasks
Import a virtual appliance
Create a new virtual machine
Explore Further
Learn about vSphere
Manage multiple hosts, eliminate downtime, load balance your datacenter with VMotion, and more
Evaluate vSphere
Tasks
root

### Procedure

1 In the **Getting Started** tab, click **Import a virtual appliance**.

2 Select **VA Marketplace** and click **Next**.


Deploy OVF Template
Virtual Appliance Marketplace
Which virtual appliance do you want to deploy?
VA Marketplace
OVF Template Details
Name and Location
Ready to Complete
Virtual Appliances
Accellion
The Accellion Secure File Transfer Virtual Appliance provides an easy to use enterprise solution for securely transferring large digital files. Get started with the free Accellion Green EX Version.
Altor Networks - Virtual Network Security Analyzer
VNSA provides granular, real time and historical visibility into the virtual switch traffic.
Catbird V-Agent for VMware ESX Server 3
Catbird V-Security is a comprehensive security and compliance solution for virtual and physical infrastructures.
Check Point VPN-1 VE
The Check Point VPN-1 Virtual Appliance is a virtual security gateway solution designed to protect and allow secure connections between virtual systems.
Lefthand Networks Virtual SAN Appliance for VMware® ESX Server
LeftHand's Virtual SAN Appliance consolidates VMware ESX physical storage into virtual pools of iSCSI storage. This provides VMware Infrastructure the shared storage functionality required by VMware HA, VMotion, DRS, VCB, and SRM without purchasing
Help
< Back
Next >
Cancel

3 Select a virtual appliance from the list and click **Download now**.

For the shortest download time, VMware recommends that you chose a small virtual appliance.

4 Click **Next** and follow the on-screen instructions to import the virtual appliance.

After you import the virtual appliance, you can use the **Console** tab in the vSphere Client to power it on and view it. To release the pointer from the Console, press Ctrl+Alt. To view the Console in full screen mode, from the Inventory, right-click the virtual machine and select **Open Console**.

### What to do next

You have completed setup for a single-host management system in which ESX is used to run virtual machines. Explore the advantages of managing multiple hosts with vCenter Server.

## Managing Multiple Hosts with vCenter Server

You can deploy VMware vSphere with vCenter Server to manage multiple hosts at the same time.

Using vCenter Server to manage multiple hosts allows you to experiment with advanced management options, such as resource sharing, and all of the other options available within the vSphere environment.

Deploying vCenter Server provides many advantages over deploying a single, standalone ESX host. Table 1 illustrates some of the advantages and compares multiple-host management with vCenter Server as opposed to single-host management.

**Table 1.** Comparison of Multiple and Single Host Management

| Feature | vCenter Server | ESX |
|---|---|---|
| Scale of deployment | Multiple hosts | Single host |
| Capacity planning | Built in | Available separately |
| Server consolidation wizard | Built in | Available separately |
| Instant server provisioning | Available with templates and cloning | Not available |

**Table 1.** Comparison of Multiple and Single Host Management (Continued)

| Feature | vCenter Server | ESX |
|---|---|---|
| No downtime maintenance | Possible with VMotion | Not available |
| Load balancing | Possible with VMware DRS | Not available |
| Failover | Possible with VMware HA | Not available |
| Power savings | Possible with VMware Distributed Power Management (DPM) | Not available |
| Centralized access control | Available with Active Directory Integration | Not available |

## vSphere and vCenter Server

VMware vSphere is a suite of virtualization applications that includes ESX and vCenter Server.

vSphere uses virtualization to do the following tasks:

- Run multiple operating systems on a single physical machine simultaneously.
- Reclaim idle resources and balance workloads across multiple physical machines.
- Work around hardware failures and scheduled maintenance.

vSphere includes the following components in addition to the ESX host and vSphere Client you have already setup:

**VMware vCenter Server**

vCenter Server unifies resources from individual hosts so that those resources can be shared among virtual machines in the entire datacenter. It accomplishes this by managing the assignment of virtual machines to the hosts and the assignment of resources to the virtual machines within a given host based on the policies that the system administrator sets.

vCenter Server allows the use of advanced vSphere features such as VMware Distributed Resource Scheduler (DRS), VMware High Availability (HA), and VMware VMotion.

**Datacenter**

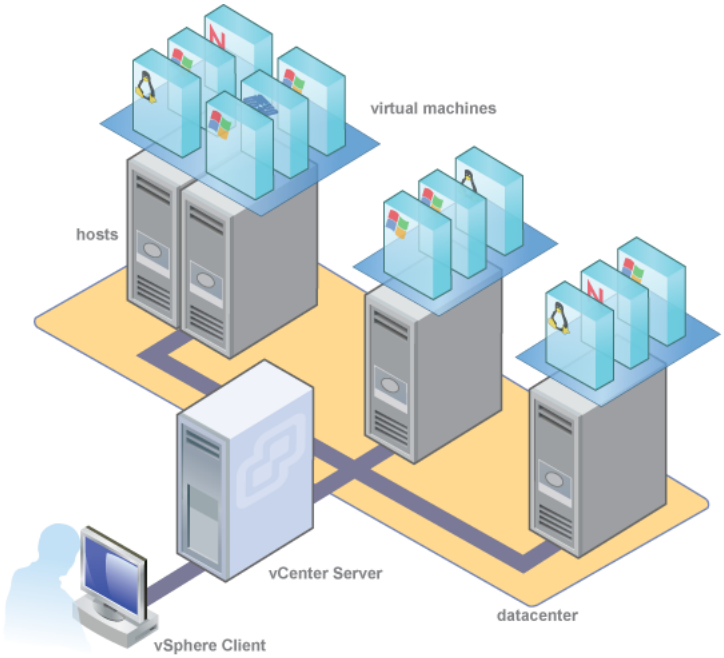
A datacenter is a structure under which you add hosts and their associated virtual machines to the inventory.

**Virtual Machine**

A virtual machine is a software computer that, like a physical computer, runs an operating system and applications. Multiple virtual machines can run on the same host at the same time. Virtual machines that vCenter Server manages can also run on a cluster of hosts.

Figure 3 shows the relationships among the basic components of vSphere and how vCenter Server can be used to manage hosts and run virtual machines.

**Figure 3.** vSphere Components




## vCenter Server Installation

Install vCenter Server to manage multiple hosts.

To get started with vCenter Server quickly and manage the host you set up, you can installed vCenter Server on a desktop or laptop. You must install vCenter Server on a Windows machine that has network access to the ESX host. For production use, VMware recommends that you install vCenter Server on a dedicated server system.

Before you install vCenter Server, make sure your system meets the minimum hardware and software requirements. vCenter Server requires a database. vCenter Server uses Microsoft SQL Server 2005 Express for small deployments with up to 5 hosts and 50 virtual machines. For larger deployments, VMware supports several Oracle and Microsoft SQL Server databases. Refer to the vSphere Compatibility Matrixes for the list of supported databases.

### vCenter Server and the vSphere Client Hardware Requirements

The vCenter Server system is a physical machine or virtual machine with access to a supported database. The vCenter Server system and the vSphere Client machines must meet specific requirements.

#### Minimum Requirements for vCenter Server

- CPU – 2 CPUs
- Processor – 2.0GHz or faster Intel or AMD processor. Processor requirements might be higher if the database runs on the same machine.
- Memory – 3GB RAM. Memory requirements might be higher if the database runs on the same machine.

  vCenter Server includes a service called VMware VirtualCenter Management Webservices. This service requires 128MB to 1.5GB of additional memory. The VirtualCenter Management Webservices process allocates the required memory at startup.
- Disk storage – 2GB. Disk requirements might be higher if the database runs on the same machine.

- Microsoft SQL Server 2005 Express disk requirements – Up to 2GB free disk space to decompress the installation archive. Approximately 1.5GB of these files are deleted after the installation is complete.
- Networking – Gigabit connection recommended.

See your database documentation for the hardware requirements of your database. The database requirements are in addition to the vCenter Server requirements if the database and vCenter Server run on the same machine.

## vCenter Server Software Requirements

Make sure that your operating system supports vCenter Server.

For a list of supported operating systems, see the *vSphere Compatibility Matrixes* at http://www.vmware.com/pdf/vsphere4/r40/vsp_compatibility_matrix.pdf on the VMware vSphere documentation Web site.

## vCenter Server Prerequisites

Before installing vCenter Server, review the prerequisites.

- You must have the installation DVD or download the installation ISO image.
- Your hardware must meet the vCenter Server hardware requirements.
- If the machine on which you are installing vCenter Server has VirtualCenter installed, you might want to upgrade instead of performing a fresh installation of vCenter Server.

  **IMPORTANT** If you want to keep your existing VirtualCenter configuration, see the *Upgrade Guide*.

- There must be no Network Address Translation (NAT) between the vCenter Server system and the hosts it will manage.
- For the installation of vCenter Server, VMware recommends installing the bundled SQL Server 2005 Express database on one of the supported operating systems. If SQL Native Client is already installed, uninstall SQL Native Client before you begin the vCenter Server installation.
- The system that you use for your vCenter Server installation will belong to a domain rather than a workgroup. If assigned to a workgroup, the vCenter Server system is not able to discover all domains and systems available on the network when using such features as vCenter Guided Consolidation Service. To use vCenter Linked Mode, multiple vCenter Server systems should be added to a domain. To determine whether the system belongs to a workgroup or a domain, right-click **My Computer** and click **Properties** and the **Computer Name** tab. The Computer Name tab displays either a Workgroup label or a Domain label.
- During the installation, the connection between the machine and the domain controller must be working.
- The computer name cannot be more than 15 characters.
- The DNS name of the machine must match the actual computer name.
- Make sure the system on which you are installing vCenter Server is not an Active Directory domain controller.
- On each system that is running vCenter Server, make sure that the domain user account has the following permissions:
  - Member of the Administrators group
  - **Act as part of the operating system**
  - **Log on as a service**
- Assign a static IP address and host name to the Windows server that will host the vCenter Server system. This IP address must have a valid (internal) domain name system (DNS) registration that resolves properly from all managed ESX hosts.

- If you install vCenter Server on Windows Server 2003 SP1, the disk for the installation directory must have the NTFS format, not the FAT32 format.
- vCenter Server, like any other network server, should be installed on a machine with a fixed IP address and well-known DNS name, so that clients can reliably access the service. If you use DHCP instead of a static IP address for vCenter Server, make sure that the vCenter Server computer name is updated in the domain name service (DNS). One way to test this is by pinging the computer name. For example, if the computer name is `host-1.company.com`, run the following command in the Windows command prompt:

  ```
  ping host-1.company.com
  ```

  If you can ping the computer name, the name is updated in DNS.

## Install vCenter Server

vCenter Server allows you to centrally manage hosts from either a physical or virtual Windows machine, and enables the use of advanced features such as VMware Distributed Resource Scheduler (DRS), VMware High Availability (HA), and VMware VMotion.

### Prerequisites

See "vCenter Server Prerequisites," on page 18.

### Procedure

1 In the software installer directory, double-click the `autorun.exe` file at `C:\<installer location>\`.

2 Click **vCenter Server**.

3 Choose a language for the installer and click **OK**.

4 When the Welcome screen appears, click **Next**.

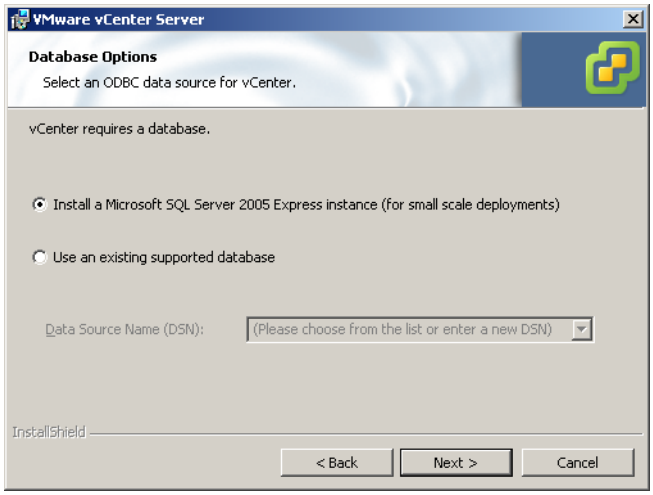
5 Select **I agree to the terms in the license agreement** and click **Next**.

6 Type your user name, organization, and vCenter Server license key, and click **Next**.

  If you omit the license key, vCenter Server will be in evaluation mode, which allows you to use the full feature set. After installation, you can convert vCenter Server to licensed mode by entering the license key using the vSphere Client.

7 Click **Install SQL Server 2005 Express instance (for small-scale deployments)**.

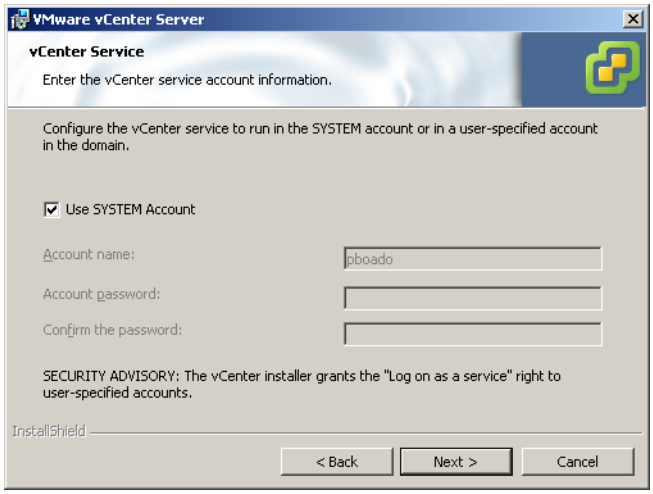
This database is suitable for small deployments of up to 5 hosts and 50 virtual machines.


VMware vCenter Server
Database Options
Select an ODBC data source for vCenter.
vCenter requires a database.
Install a Microsoft SQL Server 2005 Express instance (for small scale deployments)
Use an existing supported database
Data Source Name (DSN):
(Please choose from the list or enter a new DSN)
InstallShield
< Back
Next >
Cancel

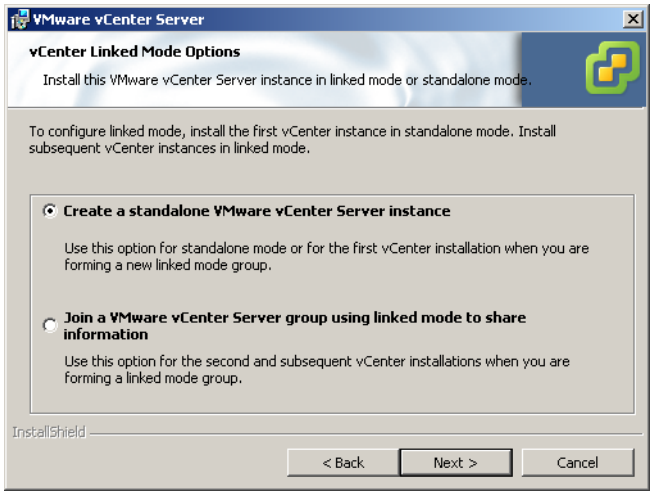
8 Enter the administrator name and password that you use when you log in to the system on which you are installing vCenter Server and click **Next**.

You need the user name and password entered here to log in to vCenter Server after you have installed it.

9 Select **Use SYSTEM Account** and click **Next**.


VMware vCenter Server
vCenter Service
Enter the vCenter service account information.
Configure the vCenter service to run in the SYSTEM account or in a user-specified account in the domain.
Use SYSTEM Account
Account name:
pboado
Account password:
Confirm the password:
SECURITY ADVISORY: The vCenter installer grants the "Log on as a service" right to user-specified accounts.
InstallShield
< Back
Next >
Cancel

10 Accept the default destination folders and click **Next**.


VMware vCenter Server
vCenter Linked Mode Options
Install this VMware vCenter Server instance in linked mode or standalone mode.
To configure linked mode, install the first vCenter instance in standalone mode. Install subsequent vCenter instances in linked mode.
Create a standalone VMware vCenter Server instance
Use this option for standalone mode or for the first vCenter installation when you are forming a new linked mode group.
Join a VMware vCenter Server group using linked mode to share information
Use this option for the second and subsequent vCenter installations when you are forming a linked mode group.
InstallShield
< Back
Next >
Cancel

11 Select **Create a standalone VMware vCenter Server instance** and click **Next**.

12 For each component that you install, accept the default port numbers and click **Next**.

If another service is already using the defaults, specify alternative port and proxy information.

13 Click **Install**.

Installation might take several minutes. Multiple progress bars appear during the installation of the selected components.

14 Click **Finish**.

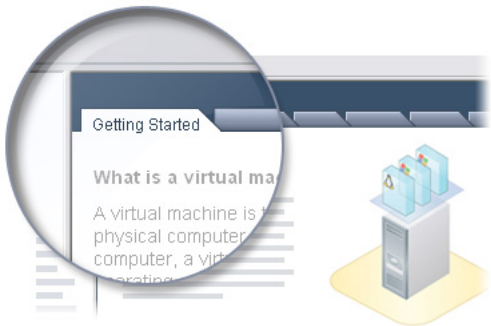
### What to do next

After you complete the installation, use the vSphere Client to connect to vCenter Server.

## Setting Up a Basic Inventory with the Getting Started Tabs

The **Getting Started** tabs in the vSphere Client connected to vCenter Server provide a wizard to help you set up a basic inventory quickly.

**Figure 4.** vSphere Client Getting Started Tab




Setting up a basic inventory with the **Getting Started** tabs after you install vCenter Server involves the following tasks:

- Creating a datacenter
- Adding the host to the datacenter
- Creating a virtual machine

You must have an empty vCenter Server inventory to view the **Getting Started** tabs wizard. After you have set up the basic inventory, the **Getting Started** tabs continue to provide information about inventory objects but no longer provide inventory setup wizard help.

## Start the vSphere Client and Log In to vCenter Server

When you connect to vCenter Server with the vSphere Client, you can manage vCenter Server as well as all of the hosts and virtual machines that it manages.

### Procedure

1 Start the vSphere Client.

Double-click the shortcut or select **Start > Programs > VMware > VMware vSphere Client**.

2 Log in to vCenter Server as the administrator.

a Enter the IP address or vCenter Server name.

b Enter your Windows administrator user name.

c Enter your Windows administrator password.

3 Click **Login**.

### What to do next

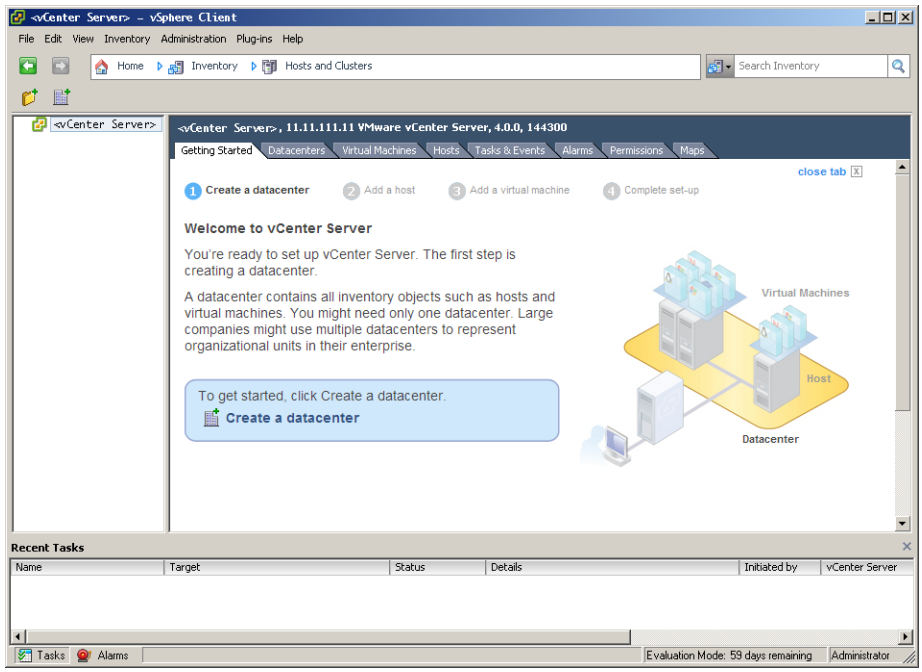
After you connect to vCenter Server with the vSphere Client, use the **Getting Started** tabs to create a datacenter.

## Create a Datacenter

The first step in setting up your vSphere environment is to create a datacenter.

If you are logging in for the first time, you should have no inventory items in the Inventory panel.

**Figure 5.** vCenter Server with no inventory objects and the first step in the Getting Started tab wizard


vCenter Server - vSphere Client
File Edit View Inventory Administration Plug-ins Help
Home Inventory Hosts and Clusters
Search Inventory
vCenter Server
vCenter Server, 11.11.111.11 VMware vCenter Server, 4.0.0, 144300
Getting Started Datacenters Virtual Machines Hosts Tasks & Events Alarms Permissions Maps
close tab
1 Create a datacenter
2 Add a host
3 Add a virtual machine
4 Complete set-up
Welcome to vCenter Server
You're ready to set up vCenter Server. The first step is creating a datacenter.
A datacenter contains all inventory objects such as hosts and virtual machines. You might need only one datacenter. Large companies might use multiple datacenters to represent organizational units in their enterprise.
To get started, click Create a datacenter.
Create a datacenter
Virtual Machines
Host
Datacenter
Recent Tasks
Name Target Status Details Initiated by vCenter Server
Tasks Alarms
Evaluation Mode: 59 days remaining
Administrator

### Procedure

1 On the **Getting Started** tab in the Information panel, follow the on-screen instructions and click **Create a datacenter**.

This creates a datacenter.

2 Name the datacenter by selecting it and entering a name.

### What to do next

After you create a datacenter, add the ESX host to it.

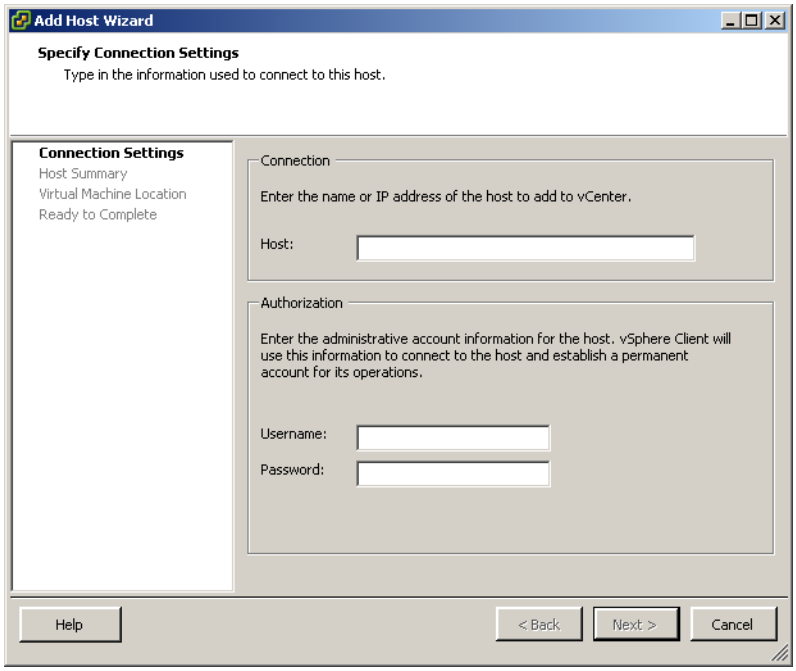
## Add a Host

When you add your host to a datacenter, vCenter Server manages it.

### Procedure

1 In the Inventory panel, select the datacenter you created if it is not selected.

2 On the **Getting Started** tab, follow the on-screen instructions and click **Add a host**.


Add Host Wizard
Specify Connection Settings
Type in the information used to connect to this host.
Connection Settings
Host Summary
Virtual Machine Location
Ready to Complete
Connection
Enter the name or IP address of the host to add to vCenter.
Host:
Authorization
Enter the administrative account information for the host. vSphere Client will use this information to connect to the host and establish a permanent account for its operations.
Username:
Password:
Help
< Back
Next >
Cancel

a Type the IP address or name of the ESX host in the **Host** name field.

b Enter the Username and Password for a user account that has administrative privileges on the selected managed host.

3 Click **Next**.

4 To confirm the Host Summary information, click **Next**.

5 Assign an existing license key to the host and click **Next**.

6 (Optional) Select **Enable Lockdown Mode** to disable remote access for the administrator account after vCenter Server takes control of this host.

Select this check box to ensure that the host is managed only through vCenter Server with root privileges.

7 Click **Next**.

8 Select a location from the list of inventory objects and click **Next**.

9 Click **Finish** to complete adding a host.

The vSphere Client displays a progress bar in the Recent Tasks pane while the host is added. Adding a new host can take a few minutes and the Status percentage might appear to pause at different increments during the process.

When a new host is added, the host might appear as disconnected until vCenter Server completes the task. After the host is added, the status changes to connected, indicating that the host connection is complete.

The host you installed and setup earlier and the virtual appliance you imported are added to the inventory managed by vCenter Server.

### What to do next

You already have a virtual machine in the inventory because you added the host with the virtual appliance to vCenter Server. Try to create a new virtual machine.

## Create a Virtual Machine

Creating a virtual machine is like building a computer. After you finish creating a virtual machine, you must install a guest operating system, applications, and VMware Tools on it.

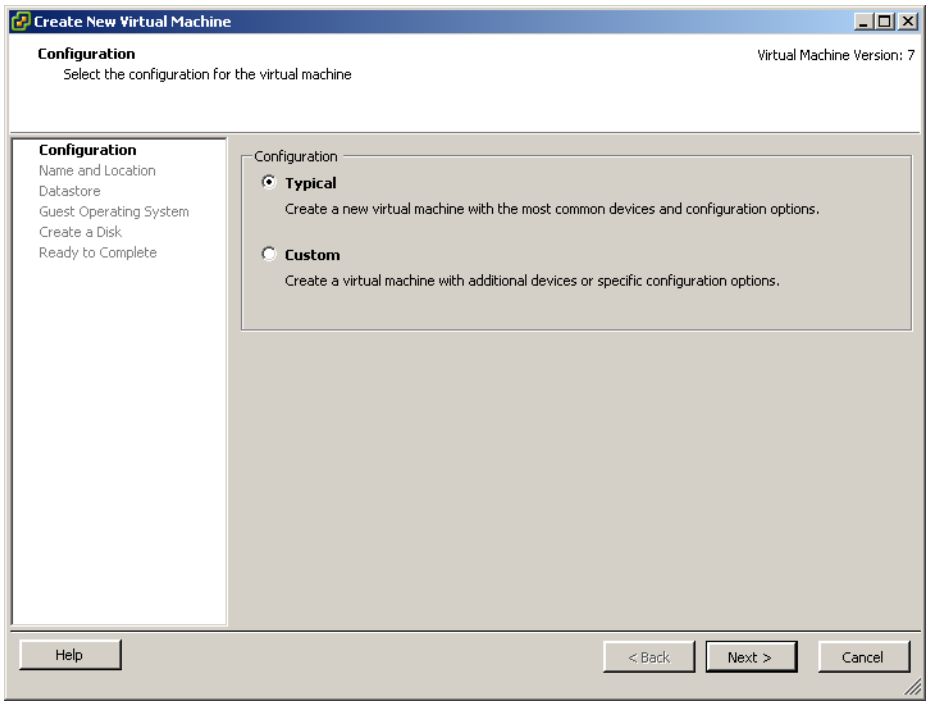
### Prerequisites

Make sure that you have an ISO image and a license for the operating system to install on the virtual machine.

### Procedure

1 In the Inventory panel, select the host machine.

2 Click **Create a new virtual machine** on the **Getting Started** tab.




3 Select **Typical** and click **Next**.

4 Type a virtual machine name and click **Next**.

5 Select a datastore in which to store the virtual machine files and click **Next**.

The datastore must be large enough to hold the virtual machine and all of its virtual disk files.

6 Under **Guest Operating System**, select the operating system family (Microsoft Windows, Linux, Novell NetWare, Solaris, or other) and select the version from the drop-down list.

This is the operating system for your virtual machine. Base your choice on your planned use of the virtual machine.

**NOTE** The wizard does not install the guest operating system. The New Virtual Machine wizard uses this information to select appropriate default values, such as the amount of memory needed.

7 Specify the size of the virtual disk and click **Next**.

Enter the disk size in megabytes (MB) or gigabytes (GB). The default is 8GB. The virtual disk must be large enough to hold the guest operating system and all of the software that you intend to install, with room for data and growth.

8 On the Ready to Complete New Virtual Machine page, review your selections and click **Finish** to create the new virtual machine.

After you create the virtual machine, install a guest operating system and VMware Tools on it. You can find instructions for how to install a guest operating system and VMware Tools in the vSphere Tutorial accessible from the vSphere Client. Select the virtual machine and follow the links on the **Getting Started** tab to learn how to install an operating system.

# Where to Go Next

You have set up your vSphere environment. From here, you can do the following:

- Expand your capacity by adding more hosts and storage.
- Expand your virtual datacenter by creating and importing new virtual machines.
- Perform a consolidation of your physical servers using the Consolidation wizard.

For more information about how to evaluate the features and benefits of vSphere, go to http://www.vmware.com/go/vi_evalresources.

## The vSphere Tutorial

The vSphere tutorial contains information about many of the basic vSphere components and tasks.

You can access the tutorial through the **Explore Further** links on the **Getting Started** tabs in the vSphere Client when you want learn more about the object selected in the inventory.

You can also access the tutorial from the **Help** menu in the vSphere Client.

## vSphere Documentation

Refer to the VMware vSphere 4.0 documentation to information on advanced host and vCenter Server configuration, setup for larger deployments for production environments, as well as information on advanced vSphere features.

The vSphere documentation consists of the combined vCenter Server and ESX documentation set. To access the current versions of this manual and other books, go to the vSphere 4.0 Documentation page on the VMware Web site.

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